

Special Issue

Metamaterials: From Fundamentals to Applications— a New Era of Engineered Electromagnetic Materials

Message from the Guest Editors

Electromagnetic metamaterials have emerged as a revolutionary class of artificially structured materials that exhibit unprecedented control over electromagnetic waves. Their ability to manipulate electromagnetic properties beyond the limitations of natural materials has opened up a vast landscape of possibilities for technological advancements.

This Special Issue aims to investigate the cutting-edge advancements and emerging trends in the field of metamaterials, with a specific focus on electromagnetics, RF, and microwaves for space technologies, 6G communications, and nonterrestrial applications. This issue seeks to consolidate the latest research findings, novel design principles, fabrication techniques, and groundbreaking applications of metamaterials in the following areas:

Space Exploration and Exploitation;
6G communications and technologies;
Reconfigurable Intelligent Surface (RIS);
Nonterrestrial Network (NTN) communications and technologies;
Ka and Ku Band technologies for long-distance communication;
Sensors, Reflectarray Antennas, Beamforming Antennas, Band pass/stop Antennas, Microwave/THz Absorbers, Solar Systems.

Guest Editors

Dr. Jasim Uddin

Department of Applied Computing and Engineering, Cardiff School of Technology, Cardiff Metropolitan University, Llandaff Campus, Western Ave, Cardiff CF5 2YB, UK

Dr. Abdolhamid Akbarzadeh Shafaroudi

Departments of Bioresource and Mechanical Engineering, McGill University, Montreal, QC H3A 0C3, Canada

Deadline for manuscript submissions

closed (20 June 2025)



Crystals

an Open Access Journal
by MDPI

Impact Factor 2.4
CiteScore 5.0



mdpi.com/si/214723

Crystals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
crystals@mdpi.com

[mdpi.com/journal/
crystals](https://mdpi.com/journal/crystals)





Crystals

an Open Access Journal
by MDPI

Impact Factor 2.4
CiteScore 5.0



[mdpi.com/journal/
crystals](https://mdpi.com/journal/crystals)



About the Journal

Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

Prof. Dr. Alessandra Toncelli

Department of Physics, University of Pisa, 56126 Pisa, PI, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Crystallography) / CiteScore - Q2 (Condensed Matter Physics)